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Original Article

REASONS FOR NON-COMPLIANCE OF MOTHERS TO IMMUNIZATION SCHEDULE OF CHILDREN EXPOSED TO HIV

MOTIVOS DA NÃO ADESÃO DE MÃES AO ESQUEMA VACINAL DE FILHOS EXPOSTOS AO HIV

RAZONES DE LA NO ADHESIÓN DE MADRES AL CALENDARIO DE VACUNACIÓN DE HIJOS EXPUESTOS AL VIH

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We aimed to describe the knowledge of HIV seropositive mother on the children immunization schedule and know the reasons for their non-compliance to the children immunization schedule. This is a descriptive study with qualitative approach carried out in the outpatient clinic of a public institution, in Fortaleza-CE, Brazil. The subjects were 16 mothers or caregivers of children up to two years of age exposed to HIV/AIDS. Data collection happened through semi-structured interviews conducted from January to March 2012. Two categories emerged from the analysis: Lack of knowledge of mother about special immunization schedule for children with HIV and Reasons for non-compliance to special immunization schedule. Mothers presented poor knowledge, fear and disinterest in the information on the disease and preventive measures, as well as the difficulties faced. Health professionals should promote strategies with these mothers seeking integration, commitment and comprehension of the importance of immunization in children.
Descriptors: Immunization Schedule; Acquired Immunodeficiency Syndrome; Child Health.

Objetivou-se descrever o conhecimento da mãe soropositiva para HIV sobre o calendário de vacinação do filho e conhecer os motivos da não adesão ao esquema vacinal do filho. Estudo descritivo, abordagem qualitativa realizado no ambulatório de uma instituição pública, em Fortaleza-CE. Os sujeitos constituíram-se de 16 mães/cuidadoras de crianças de até dois anos de idade, expostas ao HIV/AIDS. Os dados foram coletados por meio de entrevista semiestruturada aplicada de janeiro a março/2012. Da análise, emergiram duas categorias: desconhecimento da mãe sobre as vacinas do esquema especial em crianças com HIV, motivos da não adesão ao esquema vacinal especial. As mães apresentaram deficiência de conhecimento, demonstraram medo e desinteresse pelas informações acerca da doença e das medidas preventivas, bem como dificuldades enfrentadas. Os profissionais de saúde devem promover estratégias junto a essas mães visando integração, compromisso e entendimento sobre a importância da vacinação para saúde do filho.
Descritores: Esquemas de Imunização; Síndrome de Imunodeficiência Adquirida; Saúde da Criança.

El objetivo fue describir el conocimiento de madre seropositiva al VIH sobre el calendario de vacunación del hijo y conocer las razones de no adhesión al esquema de vacunas del hijo. Estudio descriptivo, cualitativo, llevado a cabo en ambulatorio de institución pública de Fortaleza-CE, Brasil. Participaron 16 madres/cuidadoras de niños con hasta dos años expuestos al VIH/SIDA. Los datos fueron recolectados a través de entrevista semiestructurada, de enero a marzo/2012. Del análisis, emergieron dos categorías: desconocimiento de la madre acerca de las vacunas especiales en niños con VIH y razones de la no adherencia al programa de vacunación especial. Las madres presentaron deficiencia de conocimiento, señalaron miedo y desinterés por informaciones sobre la enfermedad y las medidas preventivas, además de dificultades enfrentadas. Los profesionales de salud deben promover acciones con estas madres para integración, responsabilidad y atención acerca de la importancia de las vacunas a la salud del hijo.
Descriptores: Esquemas de Inmunización; Síndrome de Inmunodeficiencia Adquirida; Salud del Niño.

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INTRODUCTION

The human immunodeficiency virus (HIV) infection in Brazil is considered a stable epidemic and it is concentrated in some population subgroups that are particularly vulnerable. The infant population is a group of major concern.

According to the last Outbreak Bulletin, 608,230 AIDS cases were notified from 1980 to June 2011, being 397,662 (65.4%) males and 210,538 (34.6%) females. Also, 13,674 AIDS cases were detected in children below five years of age. However, thanks to the Health Ministry Strategies, there has been a 44.4% reduction in the AIDS incidence rate for under- five children, from 5.4 to 3.0 cases for every 100,000 people. [1].

The Brazilian government has developed and strengthened prevention, seeking to make it a habit, in particular among women and youngsters. In the case of pregnant women, antiretroviral medication (ARV) is recommended during pregnancy and parturition, besides cesarean for women with a high or unknown viral load. Among preventive measures for newborns we can mention the replacement of breast-feeding by baby milk powder and ARV use. Adopting all these measures, the chances of vertical transmission (VT) are reduced to less than 1%. [2]. Besides, it is necessary to continue therapy with the Zidovudine (AZT) drug and the use of vaccines and immunobiological drugs in children exposed to the AIDS virus, considering their susceptibility to certain infections. [3-4].

Generally speaking, vaccination calendars are designed for healthy people leading a normal life. Vaccination is the most efficient way to avoid several immuno-preventable diseases such as the BCG (Bacilo *Calmette-Guérin*) to prevent tuberculosis; DPT (diphtheria, pertussis and tetanus vaccine) against diphtheria, tetanus and whooping cough; hepatitis B, Sabin for polio, the anti-measles, rubella and the triviral vaccine. Lately, the pentavalent and inactivated polio vaccines were added to the Basic Calendar. The set of vaccines is recommended to the population from birth and offered free of charge at all Basic Health Units (UBS)[5].

However, children in special situations such as those who are immunosuppressed, premature, or under gestation situations of exposure to infectious diseases, have a higher disease risk or a bigger chance of developing adverse post-vaccine events, which may require a specific strategy or additional vaccines.[6]. Therefore, reference centers for special immunobiologic patients (CRIES) make vaccines and immunoglobines available for that specific group, seeking to offer an improvement to their fragile health conditions with modern immunobiological products, which have a high cost for the population [4].

Under these circumstances, the seropositive mother's situation is considered critical, as well that of the child born with compromised health, which requires specialized follow-up and antiretroviral (ARV) treatment. A study developed in Fortaleza identified that children exposed to HIV were not receiving immunobiologic medication, which raises concerns with regards to the low treatment adherence levels and the possible consequences of a compromised immune system [4].

Studies on factors linked to non-compliance with treatment confirm a universal reality [6-8]. It is considered that the mother and/or caregiver must be kept fully involved and committed to this health problem.

It is worth highlighting that the nursing assistance practice aims at the prevention, development and recovery of human health, enabling to identify immunologic, epidemiological, socioeconomic and

technological aspects related to nursing care in the HIV/AIDS context.

The interest for this topic, which helps to better understand the reasons for non-adherence to the vaccination program and recommended immunobiologic medicines raised the following leading questions: which is the HIV seropositive mother's knowledge on her child's vaccination calendar? And what are the reasons for non-adherence to the vaccination program?

We expect that this study can trigger an adequate action plan by health professionals, seeking to improve child care quality during the first year of life, emphasizing the importance of the infant vaccination calendar and the accompaniment of ARV and immunobiologic treatments. It is also desirable that they can further understand non-adherence reasons and promote educational strategies for mothers, stimulating them to develop commitment to the health of their HIV-exposed child.

Therefore, considering the relevance of this issue, this study aims at analyzing the seropositive mother's knowledge on her child's vaccination calendar, seeking to discover the reasons for non-compliance with the vaccination program.

METHOD

This is a descriptive-exploratory study developed at an infectious diseases hospital linked to the Single Health System (SUS), in Fortaleza-Ceará/Brazil. This institution has capacity for 118 hospital beds, out of which 7 are intensive care unit beds, 76 are adult care and 35, child care, also including 8 day hospital beds. Besides, it also boasts a clinic specialized in sexually transmitted diseases (STD), hepatitis, viral leishmaniasis, dermatologic leishmaniasis dermatology, endocrinology, etc.

As a study scenario, the HIV/AIDS specialized outpatient service was selected, with the participation of 16 HIV/AIDS positive mothers or caregivers of children exposed to HIV/AIDS of up to two years of age. A theoretic saturation criterion by data repeatability was followed to define the number of participants [9].

Data was collected between January and March 2012 through a semi-structured interview, identifying the mothers' socioeconomic and demographic profiles (age, schooling, occupation, marital status, income, place of birth) as well as child data such as sex, age, gestational age, delivery method, breast-feeding, AZT use, hospitalization number, etc). Seeking to meet set goals, some guiding questions were elaborated.

Analysis began with the qualification of participants through the presentation of data charts. Afterwards, we proceeded to analyze statements in the order they were collected, according to the following stages: pre-analysis, material exploitation and analysis of results, inference and interpretation [10]. As from the statements analysis, two categories arose: unawareness of mothers with regards to the special scheme for HIV positive children and reasons for non-adherence to the special vaccination plan. Statements were highlighted and identified through the letter M and their sequence number, seeking to preserve women's identity. Then we proceeded to discuss results with the support of the relevant literature.

This study was approved by the Research Ethics Committee of the institution responsible for the study, in agreement with Resolution 196/96 of the Health National Council [11], ratified by regulation nº 038/201. Participants authorized the use and publication of their answers through the signature of a Statement of Informed Consent (SIC).

RESULTS

With the aim of better organizing collected data, results are introduced in charts and texts with tables that describe each participant's profile. Amongst interviewed mothers, there were 14 biological mothers and two non-biological ones who offered information related to 18 children, as two of them had twins. Eight of them had between one and three children and six of them from two to five.

It is worth highlighting that ten mothers discovered their seropositive condition during the pre-natal stage and five of them learned about their serologic state before pregnancy. Nine participants had known about their HIV positive diagnosis for a period between one and five years, five for more than six years and only two for less than a year.

In these conditions, serologic status awareness and early diagnosis make it possible to adopt measures that can dramatically reduce the risk of HIV vertical transmission. Data obtained included socioeconomic aspects, pre-natal conditions and AZT prophylaxis treatment as shown in table 1.

Table 1- Distribution of maternal variables - Fortaleza, CE, Brazil, 2012

Profile	n (16)	%
Age (years)		
Up to 29	10	62,50
30 - 39	04	25,0
40 - 49	02	12,50
Marital Status		
Married/Stable Union	06	37,50
Single	09	56,25
Widow	01	6,25
Schooling		
Illiterate	02	12,50
Primary School Incomplete	07	43,75
Secondary School Incomplete	07	43,75
Occupation		
Unemployed	11	68,75
Sickness Aid	02	12,50
Employed	02	12,50
Free-lancer	01	6,25
Income (minimum monthly salary)		
Up to 1	06	37,5
1- 2	08	50,0
> 3	02	12,5
Place of Origin		
Fortaleza	08	50,0
Others	08	50,0
Pre-natal		
Yes	14	87,5
No	02	12,5
ARV Prophylaxis		
Before and during delivery	11	68,8
Labor	02	12,5
Not performed	02	12,5
Unable to inform	01	6,25

According to the chart, most women were 29 years old or younger (62.5%), out of which nine (56.2%) were single, six were married or in stable unions and one was a widow. As for schooling, seven (43.7%) had incomplete primary school, seven (43.7%) incomplete secondary school and two of them were illiterate. With regards to occupation and family income, 11 (68.7%) were unemployed, 14 (87.5%) lived with one to two minimum monthly salaries and only two (12.5%), earned three or more minimum salaries. These findings are consistent with participants' socio-demographic profiles, as they endure much financial hardship in their struggle to survive.

As for their origin, eight (50.0%) were from Fortaleza while the rest were coming from the Ceará State municipalities of Beberibe, Paraipaba, Tururu, Pedra Branca, Iguatu, Horizonte, Paracuru and Mombaça. Results evaluated awareness both in big cities and small towns.

Pre-natal consultation accompaniment was described by 14 mothers (87.5%), who confirmed they had their HIV test taken during pre-natal. With regards to antiretroviral prophylaxis, eleven mothers (68.75%) took it during pre-natal and in the delivery room, two (12.5%), only during labor; two (12.5%) did not take it at all and one was unable to inform.

The profiles of children exposed to HIV were also analyzed. Results are introduced in the table below.

Table 2 - Children exposed to HIV according to their clinical and epidemiological profiles. Fortaleza, CE, Brazil, 2012

Profile	n (18)	%
Sex		
Male	08	44,5
Female	10	55,5
Present age (months)		
Less than 1	07	38,9
1 - 2	06	33,3
3 - 5	05	27,8
Gestational age		
Pre-term	09	50,0
Full term	08	44,5
Not informed	01	5,5
Delivery method		
Cesarean	13	72,3
Vaginal	05	27,7
Use of AZT syrup		
Within the first 24 hours	13	72,2
After 24 hours of birth	03	16,6
Not informed	02	11,2
Breast-feeding		
No	15	83,3
Yes	03	16,7
Basic Health Unit Accompaniment		
Yes	16	88,8
No	01	5,56
Sometimes	01	5,56
Presence of pathologies		
No	14	77,7
Yes	04	22,3
None		
1-2	17	94,4
Sex	01	5,6

Out of the 18 children of HIV/AIDS, positive mothers, eight (44.5%) were boys and ten (55.5%), were girls; nine were pre-term babies (50.0%), eight full term ones (44.4%) and one mother was unable to inform (5.5%). As for the current age of these babies, 7 (38.9%) were less than a month old and 5 (27.8%), were between three and five months old.

With regards to the delivery method, 13 (72.2%) were born through cesarean and the others through vaginal delivery, being eleven of them (11.1%) assisted in medium to large size maternities, where VT prophylactic measures were granted to 13 (72.2%) children during their first 24 hours of life. According to results, three were assisted after 24 hours and two were unable to inform.

As for feeding, 15 (83.3%) were not breast-fed, being fed with artificial milk powder instead, in agreement with the Health Ministry recommendations and maternity routines. It was also observed that 16 (88.8%) babies were regularly checked up at a Basic Health Unit (BHU), seeking also assistance due to the occurrence of events, as four of them (22.3%) developed some kind of infection and one had been hospitalized with pneumonia symptoms.

In order to introduce different categories, we opted for describing the mothers' unawareness of the special vaccination scheme for HIV positive children and then, the reasons for non-adherence to the special vaccination plan.

Category 1 – Mothers' unawareness of the special vaccination scheme

As from the statements, we perceived that most mothers were not aware of the difference between special vaccines and those available for the general population, also revealing limited knowledge on basic child vaccination: *I don't know… I know it's to avoid getting the illness…* (M1). *I think it must protect children from several diseases* (M3). As she's got her defenses low, she's likely to get any infection (M4). *It's for him to become immune to diseases such as tuberculosis, pneumonia, whooping cough, flu…* (M5). *I know what a vaccine for flu, tetanus, paralysis, measles and whooping cough is, to avoid disease* (M6). *Vaccines are important, because then if the baby happens to get sick, it is milder* (M13).

Statements from mothers with little knowledge on special vaccines are introduced next: *There are some special vaccines, children who have the virus… I think… are not immune, they can get any disease more easily* (M2). *They avoid illnesses. That is why we have to be up to date with vaccines, so that we keep the baby's health under control* (M9). *If he doesn't take it he may get sick more easily* (M12). *I think the vaccine helps to avoid becoming seropositive* (M14).

On the other hand, we perceive from the mothers/caregivers statements, that there is a lack of family involvement, suggesting a deficiency in the comprehension of information provided by professionals. *I don't know about anything because it was the grandfather who was taking care of the baby, I only got him back now* (M8). *I don't know, I go to the health center, show the card and the lady provides the vaccines* (M10). *On these vaccines, I still don't know* (M11). *I don't really know… but the nurse informs, I can't tell* (M15).

Based on the unawareness of the seropositive mother with regards to the vaccination plan, it is important to identify the reasons for non-adherence, seeking to propose initiatives and attitudes from health professionals that can enhance protection to the health of children and families from this risk group.

Category 2 – Reasons for mothers' non-adherence to the special vaccination scheme

In the studied population, different reasons for non-compliance with the vaccination plan were identified: lack of information, lack of vaccines, little confidence in the effectiveness of immunization, denial of the fact that the child may be HIV positive, difficulty to face prejudice, difficult access to CRIES and faith in God.

Mother's responses suggest the need for immunization measures such as basic child care, in particular for those exposed to the HIV virus. However, many showed feelings of denial with regards to treatment and diagnosis: *I convinced myself that my child doesn't have the virus so he needn't take the vaccine* (M11). *I think it is fear of something, fear of being useless* (M1). *Oftentimes I don't want people to know where I go so I miss vaccination and consultations* (M12). *I am afraid that they may give my child the wrong vaccines and affect her health* (M15).

Besides these reasons, they mentioned situations that make compliance difficult: *my problem is that I live in the interior. If I leave and move here I think it would get better...* (M2). *Lack of time, but if I don't go in the set day I still go another day* (M3). *When I don't have money to go I ask someone for a ride or walk* (M14). *I don't have information on the risks the child takes by not taking the vaccine* (M16).

Spirituality is an ever-present dimension in the routine of HIV positive people. In this study, it is clear that there is a strong belief in a superior Being that will cure the child, which is also used as an excuse not to adhere to the vaccination plan: *I know God will send a vaccine. I pray to God because I know He has the power to give everything to us* (M10). *I ask God for a miracle so that my grandson*

can be cured (M13). Mothers still mention that they forget dates, which results in attitudes of indifference, carelessness and lack of commitment: *Sometimes I forget, as I cannot read, I miss consultations. I ask my other daughter but if she doesn't remind me I forget (*M6). *It is carelessness, my daughter forgets* (grandmother talking about the child's mother) (M7). *I work a lot and sometimes I end up forgetting. I stopped going to the vaccination center, it was an irresponsible attitude* (M10).

DISCUSSION

The analysis of mothers profiles agreed with those found in previous qualitative studies [4,6,12], which evidenced low schooling and income levels. Schooling, commonly associated to income levels, is a direct indicator of the socioeconomic situation. Therefore, people with HIV with low education levels may suffer a negative impact with regards to treatment adherence, which affects their living conditions. [7].

As for the interviewee's origin, it is clear that access to health services is affected by low social and financial conditions, as well as by the fact of living in municipalities outside the Fortaleza metropolitan area, which makes it more difficult to follow treatment. Therefore, accessibility to antiretroviral drugs and other medicines must be more effective, as evidence suggests that free access to HIV treatment has not granted access and adherence. [7-8].

In terms of prophylactic measures for VT elimination, it is worth mentioning the obstetric initiative related to the delivery method, which is decided according to the mother's viral load, which measures the number of virus copies per 1 milliliter of blood. As from this evaluation, cesarean is recommended for pregnant women after 33-34 weeks if their viral load is unknown or higher than 1,000 copies/ml[3].

As for child feeding, in agreement with the Health Ministry recommendations, the first AZT (oral solution) dose is administered in the delivery room or within the first two hours after birth. Breast-feeding is not recommended, being replaced by baby milk powder [3].

Children exposed to HIV must be granted medical discharge after consultation at a specialized service no later than 30 days after birth. Pre-natal data is essential, as well as delivery conditions, the period of time in which the mother has been taking the AZT drug, the starting date, doses and frequency of AZT intake by the newborn, besides anthropometric measurements, feeding details and other relevant information related to birth conditions. [3].

Parallel to care initiatives, immunization of HIV exposed children must be regularly followed, once it is considered that mother and child are vulnerable to infections, as they are both part of the risk group [4].

Effective accompaniment of the child vaccination scheme is intrinsic to the effort and commitment of the person responsible for the child care (mother, caregiver or relative), as the understanding of the health - illness process and its possible implications contributes to therapeutic adherence, besides improving self-care and facilitating coping with adverse situations.

The knowledge on a given treatment and disease prevention methods favor control and total adherence of public health system users, also contributing to improve policies aimed at that group, helping health professionals to better deal with difficulties resulting from non-adherence.

The stories introduced are related to experiences with the basic child vaccination calendar. It is therefore observed a limitation in the knowledge on the vaccination plan, also revealing unawareness of the special treatment with immunobiological medicine. Consequently, it is important that the user (mother) can learn about these services and understand the illness

that affects her child, as well as the aims of the proposed therapy. [13].

Lack of involvement in the vaccination program, together with little understanding of the process, results in non-adherence to treatment and consequently, in the breakage of vaccine immunity. The lack of commitment may be related to a feeling of guilt due to the transmission of the HIV virus to the child, besides intense anguish, which provokes different responses, from overprotective reactions to a certain distance from the child. [14].

This study was performed in Fortaleza-CE, analyzing 125 clinical records of children, which showed that most of them started immunization during their second month of life, out of which 65 (52.0%) had been given the anti-polio vaccine and 68 (64.8%) the pneumococal vaccine, presenting a reduction in the compliance with the vaccination calendar as the children grows older [4].

In this study, we approached issues related to vaccination delays, which revealed that a significant number of families have no information on the vaccines being administered and the dates of the subsequent shot, concluding that the reasons for the delays and lack of vaccination are more related to health service issues than to the particular population profile. [14].

In this sense, it is necessary that health professionals offer more dedication and information, also promoting adequate conditions to face disease, enabling treatment access to this vulnerable population group. The more the vaccination scheme is integrated to child care within their growth and development processes, the higher the immunization success rate achieved with the vaccination scheme, which results in more family awareness on health initiatives carried out by health professionals. [15].

The interactions between families and health services are inserted in a set of social, political and economic variables, being the lifestyle a key factor for health promotion and disease prevention [15]. With respect to health education, it is important to remark the educative role of nurses together with the community, developing social commitment through the exchange of information on disease care, seeking to improve solidarity and awareness in the fight to HIV/AIDS[16].

As for the reasons that affect adherence, mothers mention fear that the vaccine may not be effective or deny that the child is infected with the HIV virus, demonstrating weakness in facing the disease. It is believe that the feelings of denial and prejudice are factors that complicate adherence to the vaccination scheme, resulting in lack of family commitment to the compliance with health services appointments, thus affecting preventive measures.

The study showed different opinions and attitudes from seropositive persons with regards to ARV medication, such as: "*too much medication is bad for your health" or "it's not good to use medication for long periods"* [6]. Another study performed with 13 people living with HIV in Rio de Janeiro evidenced feelings of indifference and lack of patient effort in the search for information on the virus and therefore, lack of self-care, besides the development of attitudes that increase the chance of spreading HIV [12].

The daily routine of women infected with HIV/AIDS is full of tension, anguish and anxiety, mainly during gestation, as they suffer discrimination and prejudice from their families, besides their fear and concern about transmitting the virus to their babies for not having started treatment early enough [16]. The concern about disclosing their condition results in

missing consultations, failure to take lab tests and negligence in drugs administration, finally resulting in treatment abandonment [13]. With regards to ARV, studies suggest that the main difficulties are inherent to the stigma, lifestyle, interpersonal relations and the need to hide the medication from friends and relatives [6,12,17].

They justify their omission to their seropositive condition as a self-protective measure and some hide their diagnosis as a way to face the disease, especially before their families [12].

Facing stressful situations resulting from being HIV positive is hard. Therefore, religious attitudes and beliefs, as well as fantasy thoughts, mean that caregivers adopt miraculous strategies to deal with the impossibility to reverse the HIV infection [16].

Statements reflect lack of caregivers' interest in accompanying HIV/AIDS exposed children. Their behavior reveals lack of concern with child exposure to the virus and lack of faith in the efficacy of vaccination and professional advice.

Recent studies on nursing team care of puerperal HIV/AIDS positives in joint hospitalization, describe that indifference and lack of interest in information on the disease by their sufferers is common, which affects maternal self-care and consequently, child care [18]. Preventive measures to improve quality of life with HIV/AIDS imply the adoption of behavioral and lifestyle changes, as physical, social and personal aspects repercute in the quality of life [19].

In this study, a number of reasons for non-compliance with the recommended scheme were listed, however, difficulties related to social issues such as prejudice, fear feelings, denial, etc, seem to be harder to solve, once they are part of a complex social dynamics. Nevertheless, caregivers and family members seem to be aware of their role in the lives of HIV/AIDS positive children. Friends and family are fundamental to offer protection to those who have to face the disease [12,20].

In health services, people who seek assistance have expectations with regards to their treatment. Therefore, the reception offered by health professionals can help patients deal with such issues in their personal lives, in particular during the first treatment stages, when the situation seems to be more delicate [19].

Consequently, reflecting on the coexistence of feelings and prejudice felt by these mothers is of paramount importance, considering that sharing their diagnosis and the health condition of their children with people they trust becomes difficult and stressful. It is also necessary that professionals are sensitive and perceptive in their approach to mothers who deserve support, thus promoting a friendly and safe environment, understanding the context in which they are inserted, as well as making relevant information available to facilitate treatment adherence, thus granting more quality of life for this group.

FINAL CONSIDERATIONS

The study enabled us to understand the reasons for non-adherence to the vaccination program, which results to be a multifactor phenomenon. Therefore, the study goals were met, as we identified the possible personal reasons, such as denial and prejudice feelings, lack of information, not enough time and money, disinterest and carelessness with regards to appointment dates, as well as problems related to health services (accessibility, lack of vaccines) amongst other reasons exposed.

We believe that the lack of information of mothers/caregivers, considering the importance of

adequate compliance with the vaccination calendar is one of the reasons that impede child health improvement, as mother and child miss health services appointments for vaccination updates.

The difficulties appointed by mothers require more involvement between health services professionals and patients. Also, strategies proposed for the improvement of health conditions should stress the interaction and involvement between professionals and those responsible for the child, with a commitment to exchange information, thus stimulating the development of individual skills and the strengthening of responsibility with regards to the compliance with preventive measures.

Meanwhile, the relationship between professionals and families must be reinforced, seeking to improve adherence to child health promotion and protection measures. Attitudes and initiatives by health professionals aimed at families with incomplete vaccination must be analyzed and redirected, as this problem makes it difficult to meet goals set by the National Immunization Program and the CRIES. Therefore, the child in clinical condition must start treatment as soon as possible. It is worth highlighting that accessibility is also fundamental, as it can reduce mortality, hospitalizations and treatment costs.

The interviews consisted of seven open questions to the participants, which in most cases resulted in short answers with little topic comprehensiveness, which can be considered a study limitation. Besides, studies on the efficacy of vaccination for people committed to immunity programs are still scarce, in particular with respect to injectable immunobiologics.

Therefore, it is advisable to develop research aimed at approaching education strategies that can motivate mothers of HIV-exposed children to take care of their babies, considering themselves as the responsible adult for their child's health through the adoption of adequate care attitudes related to their disease.

Consequently, granting adherence to the vaccination scheme also implies an improvement in the quality of nursing care, as the nurse plays the role of health promoter, seeking to ensure the wellbeing and quality of life of the population that requires assistance in health centers.

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